

Docket No.: AB-126U

This listing of claims will replace all prior versions, and listings, of claims in the application:

Amendments to and Listing of Claims:

Claim 1 (currently amended): A method for treating a patient with chronic pain, comprising:
providing at least one stimulator having at least two electrodes;
implanting the at least one stimulator in ~~or adjacent to~~ at least one anterolateral area of the spine responsible for sensations in a region experiencing chronic pain;
providing operating power to the at least one stimulator;
providing stimulation parameters to the at least one stimulator;
generating stimulation pulses in accordance with the stimulation parameters; and
delivering the stimulation pulses to nerves and tissue ~~adjacent to~~ of the anterolateral spinal cord via the at least two electrodes;
~~wherein the at least one area of the spine comprises the ventral commissure; and~~
wherein the stimulator has a size and shape suitable for placement in ~~or adjacent to~~ the at least one anterolateral area of the spine.

Claim 2 (currently amended): The method of Claim 1 wherein the at least one area of the spine comprises ~~one or more of Lissauer's tract, the ventral commissure, and the spinothalamic tract.~~

Claim 3 (previously amended): The method of Claim 1 wherein the stimulation pulses are delivered at greater than about 100 Hz.

Claims 4 - 6 (canceled)

Claim 7 (original): The method of Claim 1 wherein the chronic pain is located in one or both arms, and the at least one stimulator is implanted adjacent to at least one nerve fibers of C5, C6, C7, C8, and T1.

Claim 8 (original): The method of Claim 1 wherein the chronic pain is located in one or both legs, and the at least one stimulator is implanted adjacent to at least one nerve fibers of L1-L5, S1, and S2.

Docket No.: AB-126U

Claim 9 (original): The method of Claim 1 wherein the chronic pain is located in the pelvic region, and the at least one stimulator is implanted adjacent to at least one nerve fibers of T10, T11, T12, L1-L5, and S1-S5.

Claim 10 (original): The method of Claim 1 wherein the chronic pain is located in the back, and the at least one stimulator is implanted adjacent to at least one nerve fibers of T1-T12, L1-L5, and S1.

Claim 11 (original): The method of Claim 1 wherein the chronic pain is located in the cervical region, and the at least one stimulator is implanted adjacent to at least one nerve fibers of C2, C3, C4, and C5.

Claim 12 (original): The method of Claim 1 wherein the chronic pain is located in the head/neck region, and the at least one stimulator is implanted adjacent to at least one nerve fibers of C1-C8.

Claim 13 (original): The method of Claim 1 further comprising:
providing at least one sensor;
using the at least one sensor to sense at least one physical condition; and
determining the stimulation parameters based upon the at least one sensed condition.

Claim 14 (original): The method of Claim 1 wherein providing stimulation parameters comprises receiving the stimulation parameters from at least one external appliance.

Claim 15 (original): The method of Claim 1 wherein providing operating power comprises receiving the operating power from at least one external appliance.

Claim 16 (original): The method of Claim 1 further comprising providing and implanting more than one stimulator.

Docket No.: AB-126U

Claim 17 (currently amended): A method for treating a patient with chronic pain, comprising the steps of:

- providing at least one means for stimulating tissue;
- implanting the at least one stimulating means in ~~or near~~ at least one anterolateral area of the spine responsible for sensations in a region experiencing chronic pain;
- providing operating power to the at least one stimulating means;
- providing stimulation parameters to the at least one stimulating means;
- generating stimulation pulses in accordance with the stimulation parameters; and
- delivering the stimulation pulses to nerves and tissue ~~adjacent to~~ of the anterolateral spinal cord via the at least one stimulating means;
- wherein ~~the at least one area of the spine comprises the ventral commissure;~~ and
- wherein the stimulating means has a size and shape suitable for placement in ~~or near~~ the at least one anterolateral area of the spine and has leads up to 150 mm long.

Claim 18 (original): The method of Claim 17 wherein the body of the stimulator is no more than 150 mm from the nerve to be stimulated.

Claim 19 (currently amended): The method of Claim ~~[[18]]~~ 17 wherein the at least one area of the spine comprises ~~one or more of a dorsal nerve, a spinal nerve, a dorsal column, Lissauer's tract, the spinothalamic tract, and the ventral commissure.~~

Claim 20 (currently amended): A method for treating a patient with chronic pain, comprising:

- providing at least one stimulator having at least two electrodes and at least one sensor;
- implanting the at least one stimulator in ~~or adjacent to~~ at least one anterolateral area of the spine responsible for sensation in a region experiencing chronic pain;
- providing operating power to the at least one stimulator;
- using the at least one stimulator to sense at least one physical condition;
- determining stimulation parameters based upon the at least one sensed condition;
- generating stimulation pulses in accordance with the stimulation parameters; and
- delivering the stimulation pulses to nerves and tissue ~~adjacent to~~ of the anterolateral spinal cord via the at least two electrodes;
- wherein the stimulator has a size and shape suitable for placement in ~~or adjacent to~~ the at least one anterolateral area of the spine.

Docket No.: AB-126U

Claim 21 (previously amended): The method of Claim 17 wherein the stimulation parameters are determined using at least one external appliance.

Claim 22 (previously amended): The method of Claim 17 wherein providing operating power to the at least one stimulator comprises receiving power from at least one external appliance.

Claim 23 (original): The method of Claim 22 wherein providing power to the at least one stimulator further comprises storing the power received from the at least one external appliance.

Claim 24 (previously amended): The method of Claim 17 further comprising providing and implanting more than one stimulator.